STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
Weights and Measures Program Metrology Laboratory
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REPORT OF CALIBRATION

Issued To:
Washington State Patrol
8623 Armstrong Road SW
Olympia, WA 98504

Point of Contact:
Dave Cromer
Ph. 360-596-6000

Purchase Order Number:
N/A

Report Number:
200446-0-L3184-1

Calibration Date: November 22, 2011

This is to certify that the information contained in this report is true and correct as of the date of calibration.

Dan Wright, State Metrologist

11/29/2011
Date of Issue

NVLAP®

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WSDA Weights and Measures Metrology Laboratory

Report Number: 200446-0-L3184-1 Calibration Date: November 22, 2011

Artifact(s) Description

Test Item:	Weight Cart, 4000 lb	Date Received:	November 21, 2011
Serial Number:	105-6-93	Model Number:	WC-20K
Manufacture:	Weight Carts, Inc.	Tolerance Specification:	NIST HB 105-8
Condition:	Good	Material:	Steel

Calibration Information

Job Order #:	L3184	Temperature:	19.8 °C
Metrologist:	Dan Wright	Pressure:	747.2 mm Hg
Procedure:	NIST IR 6969, SOP 4	Humidity:	44.6 % RH

Laboratory Reference Standards Used

Description	Serial Number	Cert. Number	Cal Date	Cal Due
1000 lb - 10 lb	SET WC	200446-0-L3023	10/15/2010	10/15/2012

Traceability Statement

The artifact(s) described in this report have been compared to the Standards of the State of Washington. The Standards of the State of Washington are traceable to the National Institute of Standards and Technology (NIST) and are part of a comprehensive measurement assurance program for ensuring continued accuracy and measurement traceability within the level of uncertainty reported by this laboratory. The SI unit for mass is the kilogram (kg). For consumer convenience, measurement results are occasionally reported in the avoirdupois unit. One (1) avoirdupois lb equals 453.59237 g (exactly). The report number for this report is the only unique report number to be used in referencing measurement traceability for the artifact(s) described in this report.

Uncertainty Statement

The combined standard uncertainty includes uncertainties reported for the standard, uncertainties associated with the measurement process, uncertainties for any observed deviations from reference values which are less than surveillance limits, and other uncertainties associated with the particular artifact (i.e., material density, air buoyancy corrections, etc.). The combined standard uncertainty is multiplied by k, a coverage factor of 2, to give the expanded uncertainty (which defines an interval with an approximate 95 percent level of confidence). The expanded uncertainty presented in this report is consistent with NIST Technical Note 1297. Stated uncertainties are less than 1/3 of the applicable tolerances. Magnetic testing has not been performed and there are no components for the effects of magnetism in the uncertainty budget.

Certification Statement

Accredited by the National Institute of Standards and Technology (NIST) through the National Voluntary Laboratory Accreditation Program (NVLAP) for the specified scope of accreditation under lab code 200446-0. This laboratory meets the requirements of ISO/IEC 17025 and ANSI/NCSL Z540-1.

Pertinent Information

- In-accordance-with ISO/IEC FDIS 17025, General Requirements for the Competence of Testing and Calibration Laboratories, paragraph 5.10.4.4 'A calibration certificate (or calibration label) shall not contain any recommendation on the calibration interval except where this has been agreed with the client. This requirement may be superseded by legal regulations.'

- In-accordance-with Washington Administrative Code (WAC) Chapter 16-663, Service Agents -- Reporting, Test Procedures, Standards And Calibration Of Weighing And Measuring Devices, Section 16-663-130, Adequacy of standards and submission of standards for certification, paragraph 2, '... All standards used for servicing, repairing and/or calibrating commercial weighing and measuring devices must be submitted at least every two years for examination and certification...'

- Liquid levels, as stated on the attached Weight Cart Inspection Checklist, must be maintained as close to reference levels as possible during use.

- The attached Weight Cart Inspection Checklist is an integral component of this Report of Calibration and a copy must be maintained with the cart and reviewed prior to use.

- Any maintenance, repairs, replacement of parts, or damage to the weight cart or its components will likely result in an out-of-tolerance condition. Maintenance or replacement of components such as batteries, tires, filters, or other items listed on the attached Weight Cart Inspection Checklist will require calibration of the weight cart prior to subsequent use.

- The artifact(s) listed above have been found and/or left within the tolerances for the specification stated above, except as noted. An artifact is considered in-tolerance when the correction plus the measurement uncertainty is equal to or less than the specified tolerance. ***Bold Italic*** print indicates an out-of-tolerance reading.

- All corrections stated in this report correlate to a "Conventional Mass" (CM), also known as 'apparent mass", scale verses 8.0 g/cm^3 reference mass density and an air density of 1.2 mg/cm3 at 20 °C.

- The results listed in this report relate only to the artifacts described and extent of calibrations performed.

WSDA Weights and Measures Metrology Laboratory

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As Found Calibration Results

Nominal Mass (lb)	ID	True Mass (lb)	True Mass Correction (lb)	Conventional Mass (lb)	Conventional Mass Correction (lb)	Uncertainty k=2 ± (lb)	NIST HB 105-8 Tolerance ± (lb)	Assumed Density (g/cm³)	WM Seal
4000				*3995.39*	*-4.61*	0.29	1.25	7.7	0263089

As Left Calibration Results

Nominal Mass (lb)	ID	True Mass (lb)	True Mass Correction (lb)	Conventional Mass (lb)	Conventional Mass Correction (lb)	Uncertainty k=2 (lb)	NIST HB 105-8 Tolerance ± (lb)	Assumed Density (g/cm³)	WM Seal
4000				4000.10	0.10	0.29	1.25	7.7	0263089

WSDA WASHINGTON STATE DEPARTMENT OF AGRICULTURE — Metrology Laboratory Form WAMRF-011 4/9/03

Weight Cart Inspection Checklist

COMPANY **Washington State Patrol**	INSPECTION DATE **November 22, 2011**	STATE TEST NO. **200446-0-L3184-1**
ADDRESS **8623 Armstrong Road SW** **Olympia, WA 98504**	NOMINAL VALUE **3975 lb**	MODEL NUMBER **WC-20k**
	MANUFACTURER **Weight Carts, Inc.**	SERIAL NUMBER **105-6-93**
POINT OF CONTACT **Greg Parriott**	PHONE NUMBER **360-596-6000**	

_____ Power: Electric Battery ☒ ❖ Electric Generator ☐ ❖ Gasoline ☐ ❖ Diesel ☐

_____ Fluids:	☐ Engine Oil		Reference Level:
	☐ Hydraulic Oil	Sealed? Yes ☐ No ☐	Reference Level:
	☒ Battery	Sealed? Yes ☐ No ☒	Reference Level: **just above plates**
	☐ Fuel	Sight Gauge? Yes ☐ No ☐	Reference Level:

_____ Number of axles: **2**

_____ Number / Size of Tires: **2 @ 18 X 7 X 121/2 and 2 @ 21 X 7 X 15**

_____ Nominal mass of weight cart is suitably marked. Yes ☒ No ☐

_____ Do fluid drain tubes extend beyond the body of the cart? Yes ☐ No ☐ N/A ☒

_____ Sealed wheel bearings. Yes ☒ No ☐

_____ Drain holes present in locations where water may accumulate. Yes ☒ No ☐

_____ Weight restraint railing permanently fixed and solid. Yes ☒ No ☐

_____ Adjusting cavity is accessible. Yes ☒ No ☐ Approximate capacity: **20** lb

_____ Adjusting cavity sealed. Yes ☒ No ☐

_____ Service brakes are functioning properly. Yes ☒ No ☐

_____ Parking brakes are functioning properly. Yes ☒ No ☐

_____ Remote control is functioning properly. Yes ☐ No ☐ N/A ☒

_____ General condition at time of calibration (i.e., any accumulated dirt/debris, damage, loose parts, or evidence of tampering or unauthorized entry of seals): **Good**

_____ List and report any repair and/or maintenance performed (i.e., leaks repaired, parts replaced, wheels changed, welding performed, etc.) since the last calibration: **Painted**

Authorized Signature: Dan Wright